AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1. (Currently Amended) A method for ~~increasing cell survival in cell therapy treatment,~~ treating a disorder selected from the group consisting of neurodegenerative diseases, muscular dystrophies, stroke, diabetes, hemophilia, and wounds, the method ~~comprises the steps of~~ comprising inducing in a cell the expression of at least one cell survival gene, by introducing and expressing in said cell a nucleic acid sequence encoding a functional transcription factor selected from the group consisting of EPAS1, ~~HIF-1~~ HIF-1α and ~~HIF-3~~ HIF-3α or a functional analog thereof.

2. (Cancelled)

3. (Currently Amended) The method of claim ~~2, wherin said cardioprotective gene is~~ 1, wherein said transcription factor induces expression of a gene selected from the group consisting of LIF, LIF-R and CT-1.

4. (Currently Amended) The method of claim 3, wherein said ~~cardioprotective~~ gene is CT-1.

5. (Currently Amended) The method of claim 3, wherein said ~~cardioprotective~~ gene is LIF.

6. (Currently Amended) The method of claim 3, wherein said ~~cardiporotective~~ gene is LIF-R.

7. (Previously Amended) The method of claim 1, wherein said nucleic acid sequence is a cDNA.

8. (Previously Amended) The method of claim 1, wherein the cell is a mammalian cell.

9. (Currently Amended) The method of claim 8, wherein the mammalian cell is selected from the group consisting of myoblast, skeletal muscular cell, cardiomyocyte, smooth muscle cell, bone marrow cell, endothelial cell, endothelial progenitor cell, fibroblast and embryonic stem ~~celll.~~ cell.

10. (Previously Amended) The method of claim 1, wherein said nucleic acid sequence is introduced into the cell using a method selected from the group consisting of adenoviral infection, and plasmid, cosmid or artificial chromosome transfection and electroporation.

11-14. (Cancelled)

15. (Previously Amended) The method of claim 1, wherein said method is for wound healing.

16. (Withdrawn) A method for increasing the metabolic activity of a muscular cell, comprising the step of introducing and expressing in said cell a nucleic acid sequence encoding a functional transcription factor of EPASI or a functional analog thereof.

17. (Withdrawn) The method of claim 16, wherein said transcription factor induces the expression of at least one cell survival gene selected from the group consisting of LIF, LIF-R, CT-1.

18. (Withdrawn) The method of claim 16, wherein said transcription factor induces the expression of a CT-1, a cardioprotective gene.

19. (Cancelled)

20. (Withdrawn) A method for improving cardiac tissue functions of a mammal, comprising the step of providing to the cardiac tissue of said mammal a plurality of genetically modified cells expressing a nucleic acid sequence encoding a functional transcription factor of EPAS1 or a functional analog thereof.

21. (Withdrawn) The method of claim 20, wherein said genetically modified cells are provided by injecting directly said nucleotide sequence in the cardiac tissue of said mammal.

22. (Withdrawn) The method of claim 20, wherein said genetically modified cells are provided by transplanting into said cardiac tissue a plurality of cells genetically modified for expressing said transcription factor, and wherein said cells originate from a compatible donor.

23. (Withdrawn) The method of claim 22, wherein said transplantation is autologous.

24. (Withdrawn) The method of any one of claims 17 to 23, wherein said transcription factor induces the expression of at least one cell survival gene selected from the group consisting of, LIF, LIF-R, CT-1.

25-27. (Cancelled)

28. (Withdrawn) The method of claim 24, wherein the transcription factor induces the expression of CT-1 and the tissue is a muscular tissue.

29. (Withdrawn) The method of claim 24, wherein the transcription factor induces the expression of LIF and the muscular tissue is a cardiac tissue.

30. (Withdrawn) A genetically modified muscular cell expressing a functional EPAS1 transcription factor or a functional analog thereof.

31. (Withdrawn) The cell of claim 27, wherein said cell is a myoblast, a skeletal muscular cell or a cardiac cell.

32. (Withdrawn) The cell of claim 27, wherein said transcription factor is inducible.

33. (Withdrawn) The cell of claim 27, wherein said transcription factor induces the expression of at least one cell survival gene selected from the group consisting of LIF, LIF-R, CT-1.

34. (Withdrawn) The cell of claim 27, wherein said transcription factor induces the expression of CT-1.

35. (Withdrawn) The cell of 27, wherein said transcription factor induces the expression of LIF.

36. (Withdrawn) The cell of claim 27, wherein said transcription factor induces the expression of LIF-R.

37. (Withdrawn) The cell of claim 27, wherein said cell comprises a cDNA encoding said transcription factor.

38. (Withdrawn) A modified cell that contains the nucleic acid of claim 1.

39. (Withdrawn) The cell of claim 35, wherein said cell is selected from the group consisting of myoblast, mammalian skeletal muscular cells, cardiac cells, bone marrow cells, fibroblasts, smooth muscle cells, endothelial cells, endothelial progenitor cells and embryonic stem cells.

40. (Withdrawn) A transgenic animal generated from the cell of claim 35, wherein said nucleic acid is expressed in said transgenic animal.

41-42. (Cancelled)

43. (New) The method of claim 39, wherein the cell is a bone marrow cell.

44. (New) The method of claim 43, wherein the disorder is a neurodegenerative disease or stroke.

45. (New) The method of claim 44, wherein the disorder is Parkinson's disease.

46. (New) The method of claim 1, wherein the transcription factor is EPAS1 or a functional analog thereof.

47. (New) The method of claim 1, wherein said nucleic acid is used in an amount sufficient to improve cell survival and wherein said disorder is characterized by cell death in stress conditions by high hypoxia or implantation in a new host milieu.